

photocopies. A Formal Request for Approval of Drawing Amendment is submitted concurrently herewith. Applicants, therefore, submit that the drawing objection has been overcome and, hence, solicit withdrawal thereof.

Claims 5 and 9 were rejected under the second paragraph of 35 U.S.C. §112.

In the statement of the rejection, the Examiner questioned the expression "effective area." This rejection is traversed as legally erroneous.

Indefiniteness under the second paragraph of 35 U.S.C. §112 is a **question of law**, not form. *Personalized Media Communications LLC v. U.S. International Trade Commission*, 161 F.3d 696, 48 USPQ2d 1880 (Fed. Cir. 1998); *Tillotson, Ltd v. Wlaboro Corp.*, 831 F.2d 1033, 4 USPQ2d 1450 (Fed. Cir. 1987); *Orthokinetics Inc. v. Safety Travel Chairs Inc.*, 806 F.2d 1565, 1 USPQ2d 1081 (Fed. Cir. 1986). Accordingly, in rejecting a claim under the second paragraph of 35 U.S.C. §112, the Examiner must provide a basis and fact and/or cogent technical reasoning to support the ultimate legal conclusion that one having ordinary skill in the art, with the supporting specification in hand, would not be able to reasonably ascertain the scope of protection defined by a claim. *In re Okuzawa*, 537 F.2d 545, 190 USPQ 464 (CCPA 1976). Significantly, consistent judicial precedents holds that reasonable precision in light of the particular subject matter involved is all that is required by the second paragraph of 35 U.S.C. §112. *Zoltek Corp. v. United States*, *supra*; *Miles Laboratories, Inc. v. Shandon, Inc.*, 997 F.2d 870, 27 USPQ2d 1123 (Fed. Cir. 1993); *North American Vaccine, Inc., v. American Cyanamid Co.*, 7 F.3d 1571, 28 USPA2d 1333 (Fed. Cir. 1993); *U.S. v. Teletronics Inc.*, *supra*; *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231USPQ (Fed.

Cir. 1986). Applicants stress that claims must be interpreted as one having ordinary skill in the art would have interpreted the claims in light of and consistent with the written description of the supporting specification. *Zoltek Corp. v. United States, supra; Miles Laboratories, Inc. v. Shandon, Inc. supra.*

In applying the above legal tenets to the exigencies of the case, Applicants submit that the Examiner did not discharge the initial burden of establishing a *prima facie* basis to deny patentability to the claimed invention under the second paragraph of 35 U.S.C. §112. The Examiner must do something more than question the meaning of the art-recognized term "effective area." The Examiner has done little to factually establish that one having ordinary skill in the art would have been confused as to the scope of the claimed invention. In short, the Examiner has not established a *prima facie* basis to deny patentability to the claimed invention under the second paragraph of 35 U.S.C. §112.

At any rate, in order to expedite prosecution, appended hereto as Exhibit A is an excerpt from a publication entitled "NONLINEAR FIBER OPTICS" by Agrawal, Academic Press, Inc., 1989, page 20, wherein formula 2.3.29 defines "effective area". It should, be apparent, that one having ordinary skill in the art would understand that "effective area" is an optical characteristic and can not be depicted on the drawing.

Based upon the foregoing, it should be apparent that one having ordinary skill in the art would have no difficulty understanding the scope of the claimed invention when reasonably interpreted in light of and consistent with the written description of the specification, which is the judicial standard. *Miles Laboratories, Inc. v. Shandon, Inc. supra.* Applicants, therefore, submit that the imposed rejection of claims 5 and 9 under

the second paragraph of 35 U.S.C. §112 is not legally viable and, hence, solicit withdrawal thereof.

Claims 1 and 3 were rejected under 35 U.S.C. §102 for lack of novelty as evidenced by Kinoshita.

In the statement of the rejection, the Examiner referred to Fig. 6 asserting the disclosure of a Raman Amplifier identically corresponding to that claimed. This rejection is traversed.

The factual determination of lack of novelty under 35 U.S.C. §102 requires the identical disclosure in a single reference of each element of a claimed invention, such that the identically claimed invention is placed into the recognized possession of one having ordinary skill in the art. *Crown Operations International Ltd v. Solutia, Inc.*, 208 F.3d 1339, 54 USPQ2d 1917 (Fed. Cir. 2002); *Helifix Ltd. v. Blok-Lok, Ltd.* 208 F.3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994). There is a fundamental and significant difference between the claimed invention and Kinoshita's amplifier that scotches the factual determination that Kinoshita identically describes the claimed invention within the meaning of 35 U.S.C. §102.

The invention defined in independent claim 1 is directed to a Raman Amplifier
"wherein the pump light has a wavelength within the amplification wavelength band of an
ER-doped optical amplifier (EDFA)."¹¹ It is not apparent and the Examiner has not pointed to "page and line" wherein such a pump light is identically disclosed by Kinoshita, as required by the Court of Appeals for the Federal Circuit. *In re Rijckaert*, 9 F.3d 1531, 28

USPQ2d 1955 (Fed. Cir. 1993); Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984). In this respect, Applicants would note that according to Fig. 6 of Kinoshita, the Fig. relied upon by the Examiner, and related discussion thereof in the text, as at column 21, lines 41 et. seq., the pump light has a wavelength within the 1.47μm band (1.45 to 1.49 μm). This band does not fall within the amplification wavelength band of an EDFA. See, for example, page 8 of the written description of the specification, lines 4 through 12.

The above argued functionally significant difference between the claimed amplifier and Kinoshita's amplifier undermines the factual determination that Kinoshita identically describes the claimed invention within the meaning of 35 U.S.C. §102.

Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc., 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); Kloster Speedsteel AB v. Crucible Inc., 793 F.2d 1565, 230 USPQ 81 (Fed. Cir. 1986). Applicants, therefore, submit that the imposed rejection of claims 1 and 3 under 35 U.S.C. §102 for lack of novelty as evidenced by Kinohsita is not factually viable and, hence, solicit withdrawal thereof.

Claim 6 was rejected under 35 U.S.C. §102 for lack of novelty as evidenced by Akasaka et al.

In the statement of the rejection, the Examiner referred to Fig. 1 of Akasaka et al. asserting the disclosure of an optical transmission system identically corresponding to that claimed. This rejection is traversed as factually erroneous.

As previously pointed out, the factual determination of lack of novelty under 35 U.S.C. §102 requires the identical disclosure in a single reference of each element of

claimed invention such that the identically claimed invention is placed into the knowing possession of one having ordinary skill in the art. *Crown Operations International Ltd v. Solutia, Inc., supra; Helifix Ltd. v. Blok-Lok, Ltd. supra; Electro Medical Systems S.A. v. Cooper Life Sciences, Inc., supra*. Moreover, the Examiner's required to point to "page and line" wherein an applied reference, Akasaka et al. in this case, identically discloses each feature of a claimed invention. *In re Rijckaert, supra; Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., supra*. That burden has not been discharged. Indeed, there is a fundamental and significant difference between the claimed invention and the optical transmission system disclosed by Akasaka et al. that scotches the factual determination that Akasaka et al. identically describe the claimed invention within the meaning of 35 U.S.C. §102.

Specifically, in accordance with the claimed invention, the wavelength of the pump light is within the amplification wavelength band of an EDFA. This feature is neither disclosed nor suggested by Akasaka et al. In short, the wavelength of the pump light employed by Akasaka et al. is not within the amplification waveband of an EDFA. For example, advertizing to column 14 of Akasaka et al., lines 18 through 20, the wavelength of 1435nm and 1465nm are employed. In column 19 of Akasaka et al., lines 49 through 54, the wavelengths of 1435nm, 1450nm and 1480nm are disclosed.

The above argued difference between the claimed invention and the optical transmission system disclosed by Akasaka et al. undermines the factual determination that Akasaka et al. identically describe the claimed invention within the meaning of 35 U.S.C. §102. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc., supra; Kloster Speedsteel AB v. Crucible Inc., supra*. Applicants,

therefore, submit that the imposed rejection of claim 6 under 35 U.S.C. §102 for lack of novelty as evidenced by Akasaka et al. is not factually viable and, hence, solicit withdrawal thereof.

Claim 2 was rejected under 35 U.S.C. §103 for obviousness predicated upon Kinoshita et al. in view of Watanabe.

In the statement of the rejection, the Examiner concluded that one having ordinary skill in the art would have been motivated to modify Watanabe's Raman Amplifier by employing a pumplight wavelength of 1549nm in view of Watanabe. This rejection is traversed as legally erroneous.

The Court of Appeals for the Federal Circuit has imposed upon the Examiner the burden of making a "thorough and searching" factual inquiry and, based upon that factual inquiry, explaining **why** one having ordinary skill in the art would have been realistically motivated to modify an applied reference, the Raman Amplifier of Kinoshita in this case, to arrive at a claimed invention. *In re Lee*, __F.3d__, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002). Indeed: "The showing of a motivation to combine must be clear and particular, and it must be supported by actual evidence." *Teleflex Inc. v. Ficosa North American Corp.*

__F.3d__, 63 USPQ2d 1374, 1387 (Fed. Cir. 2002).

In applying the above legal tenets in the exigencies of this case, Applicants submit that the Examiner do not establish the requisite realistic motivation by "clear and particular" factual evidence. The Examiner points to Watanabe and asserts "for purpose of lowering loss in optical transmisivity" (first full paragraph on page 5 of the July 2,

2002 Office Action) as a reason to deviate from the teachings of Kinoshita. The Examiner is questioned: **Where in Watanabe is the pump light wavelength of 1549nm linked to "lowering loss in optical transmisivity?"** Clearly, the Examiner's attempt to establish the motivational element is without the requisite "thorough and searching" factual inquiry mandated by *In re Lee, supra*.

The Examiner has done little more than identify wherein a feature of a claimed invention is perceived to reside in a disparate reference and then announce the obviousness conclusion. But this falls short of the judicial requirement for making clear and particular factual findings as to a specific understanding or specific technological principle which would have realistically impelled one having ordinary skill in the art to deviate from the teachings of Kinoshita et al. to arrive at the claimed invention. *In re Kotzab*, 217 F.3d 1365, 55 USPQ 1313 (Fed. Cir. 2000); *Grain Processing Corp. v. American-Maize Products Co.*, 840 F.2d 902, 5 USPQ2d 1788 (Fed. Cir. 1988).

Applicants, therefore, submit that a prima facie basis to deny patentability to the claimed invention has not been established. Accordingly, Applicants submit that the imposed rejection of claim 2 under 35 U.S.C. §103 for obviousness predicated upon Kinoshita in view of Watanabe is not factually or legally viable and, hence, solicit withdrawal thereof.

Applicants acknowledge, with appreciation, the Examiner's allowance of claim 8 and the Examiner's indication that claims 4 and 7 would be allowed if presented in independent form. Based upon the arguments advanced *supra*, Applicants submit that all

rejections have been overcome and that all pending claims are in condition for immediate allowance. Favorable consideration is, therefore, respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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